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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/087,821 | 03/05/2002 | Toshihiko Kawakubo | 220352US0 | 4778 |
| 22850 | 7590 | 03/09/2004 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. | | | | |
| 1940 DUKE STREET | | | | |
| ALEXANDRIA, VA 22314 | | | | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1713 | |

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,821

Applicant(s)

KAWAKUBO ET AL.

Examiner

Robert D. Harlan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed by Applicant on 12/09/03 has been entered.

2. New claim 10 has been added.

Response to Amendment/Arguments

3. Applicant's amendment and arguments filed on 12/09/03 have been fully considered and they are found unpersuasive.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. First the process claims reads as two separate processes. One step comprising polymerizing vinyl chloride in an aqueous medium in a vessel fitted with a reflux condenser and

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another step comprising "starting to add" an anti-foam agent and a partially saponified polyvinyl alcohol. There is no mentioning of vinyl chloride in the second process.

Furthermore, "the polymerization system" and "the recovery of unreacted monomers" lack an antecedent basis. Also, what does "starting to add" mean? Why not simply say adding or add?

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2 and 4-10 remain rejected under 35 U.S.C. 102(b) as being anticipated by Wierer et al., U.S. Patent No. 5,314,530 (hereinafter "Wierer"). Wierer teaches a process for preparing under emulsion or suspension polymerization conditions, vinyl chloride using an anti-foam agent, polyvinyl alcohol, and in some cases an olefinic comonomer. See Wierer, Abstract; col. 3, lines 21-27; col. 5, lines 22-42; Example 1.

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8. The Applicants argue Wierer teaches a foam stabilizer, not an anti-foam agent. Also the foam stabilizer is added after the polymerization to a aqueous dispersion containing the polymer. First, how does a foam stabilizer differ from an anti-foam agent? The purpose of both are to minimize the production of foam. The Examiner contends that the two terms are in fact synonymous and have the same purpose. With respect to the addition of the anti-foam agent, what difference does it make if the foam stabilizer is added before, during or after, where the purpose-to minimize foam is reached. How is the time of addition critical? The examiner contends that the addition of the foam stabilizer is not critical if the production of foam is minimize.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claim 3 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Wierer in view of Coleman, U.S. Patent No. 4,230,843 (hereinafter "Coleman"). The present claim 3 differs from Wierer in that Wierer does not teach the use of a silicone anti-foam agent. Silicon anti-foaming agents PVC preparations are common as exemplified in the examples section. See Coleman, col. 17, line 6. In view of Coleman, one having an ordinary skill in the art would be motivated to modify Wierer by using a silicone anti-foam agent. Such modification would be obvious because one would expect that PVC polymerizations as taught by Wierer would be similarly useful and applicable to the polymerizations taught in Coleman.

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Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

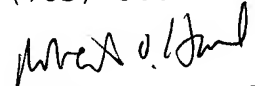
13. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert D. Harlan whose telephone number is (571) 273-1102. The examiner can normally be reached on Mon-Fri, 10 AM - 8 PM.

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15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 273-1114. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

16. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1495.


Robert D. Harlan
Primary Examiner
Art Unit 1713

rdh
March 3, 2004